



[4910-13-P]

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2019-0326; Product Identifier 2018-NM-166-AD]

RIN 2120-AA64

Airworthiness Directives; The Boeing Company Airplanes

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Notice of proposed rulemaking (NPRM).

SUMMARY: We propose to adopt a new airworthiness directive (AD) for all The Boeing Company Model 737-100, -200, -200C, -300, -400, and -500 series airplanes. This AD was prompted by significant changes made to the airworthiness limitations (AWLs) related to fuel tank ignition prevention and the nitrogen generation system. This AD would require revising the existing maintenance or inspection program, as applicable, to include new or revised AWLs. We are proposing this AD to address the unsafe condition on these products.

DATES: We must receive comments on this proposed AD by [INSERT DATE 45 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

ADDRESSES: You may send comments, using the procedures found in 14 CFR 11.43 and 11.45, by any of the following methods:

- Federal eRulemaking Portal: Go to <http://www.regulations.gov>. Follow the instructions for submitting comments.
- Fax: 202-493-2251.
- Mail: U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE., Washington, DC 20590.

- Hand Delivery: Deliver to Mail address above between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.

For service information identified in this NPRM, contact Boeing Commercial Airplanes, Attention: Contractual & Data Services (C&DS), 2600 Westminister Blvd., MC 110-SK57, Seal Beach, CA 90740-5600; phone: 562-797-1717; Internet: <https://www.myboeingfleet.com>. You may view this service information at the FAA, Transport Standards Branch, 2200 South 216th St., Des Moines, WA. For information on the availability of this material at the FAA, call 206-231-3195.

Examining the AD Docket

You may examine the AD docket on the Internet at <http://www.regulations.gov> by searching for and locating Docket No. FAA-2019-0326; or in person at Docket Operations between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this NPRM, the regulatory evaluation, any comments received, and other information. The street address for Docket Operations (phone: 800-647-5527) is listed above. Comments will be available in the AD docket shortly after receipt.

FOR FURTHER INFORMATION CONTACT: Jeffrey Rothman, Aerospace Engineer, Propulsion Section, FAA, Seattle ACO Branch, 2200 South 216th St., Des Moines, WA 98198; phone and fax: 206-231-3558; email: jeffrey.rothman@faa.gov.

SUPPLEMENTARY INFORMATION:

Comments Invited

We invite you to send any written relevant data, views, or arguments about this proposal. Send your comments to an address listed under the ADDRESSES section. Include “Docket No. FAA-2019-0326; Product Identifier 2018-NM-166-AD” at the beginning of your comments. We specifically invite comments on the overall regulatory, economic, environmental, and energy aspects of this NPRM. We will consider all

comments received by the closing date and may amend this NPRM because of those comments.

We will post all comments we receive, without change, to <http://www.regulations.gov>, including any personal information you provide. We will also post a report summarizing each substantive verbal contact we receive about this NPRM.

Discussion

The FAA has examined the underlying safety issues involved in fuel tank explosions on several large transport airplanes, including the adequacy of existing regulations, the service history of airplanes subject to those regulations, and existing maintenance practices for fuel tank systems. As a result of those findings, we issued a final rule titled “Transport Airplane Fuel Tank System Design Review, Flammability Reduction and Maintenance and Inspection Requirements” (66 FR 23086, May 7, 2001). In addition to new airworthiness standards for transport airplanes and new maintenance requirements, that rule included Amendment 21-78, which established Special Federal Aviation Regulation No. 88 (“SFAR 88”) at 14 CFR part 21. Subsequently, SFAR 88 was amended by Amendment 21-82 (67 FR 57490, September 10, 2002; corrected at 67 FR 70809, November 26, 2002) and Amendment 21-83 (67 FR 72830, December 9, 2002; corrected at 68 FR 37735, June 25, 2003, to change “21-82” to “21-83”).

Among other actions, SFAR 88 requires certain type design (i.e., type certificate (TC) and supplemental type certificate (STC)) holders to substantiate that their fuel tank systems can prevent ignition sources in the fuel tanks. This requirement applies to type design holders for large turbine-powered transport airplanes and for subsequent modifications to those airplanes. It requires them to perform design reviews and to develop design changes and maintenance procedures if their designs do not meet the new fuel tank safety standards. As explained in the preamble to the final rule published on

May 7, 2001, we intended to adopt airworthiness directives to mandate any changes found necessary to address unsafe conditions identified as a result of these reviews.

In evaluating these design reviews, we have established four criteria intended to define the unsafe conditions associated with fuel tank systems that require corrective actions. The percentage of operating time during which fuel tanks are exposed to flammable conditions is one of these criteria. The other three criteria address the failure types under evaluation: single failures, single failures in combination with another latent condition(s), and in-service failure experience. For all four criteria, the evaluations included consideration of previous actions taken that may mitigate the need for further action.

We have determined that the actions identified in this proposed AD are necessary to address the potential of ignition sources inside fuel tanks, which, in combination with flammable fuel vapors, could result in fuel tank explosions and consequent loss of the airplane.

We have determined that accomplishing the revision required by paragraph (g) of this proposed AD would terminate the following requirements for that airplane.

- All requirements of AD 2008-10-09 R1, Amendment 39-16148 (74 FR 69264, December 31, 2009).
- The revision required by paragraph (l) of AD 2011-12-09, Amendment 39-16716 (76 FR 33988, June 10, 2011).
- The revision required by paragraph (h) of AD 2013-13-15, Amendment 39-17503 (78 FR 42415, July 16, 2013).
- The revision required by paragraph (j) of AD 2013-25-05, Amendment 39-17701 (78 FR 78701, December 27, 2013).
- The revisions required by paragraphs (l) and (n) of AD 2016-18-16, Amendment 39-18647 (81 FR 65864, September 26, 2016).

- The revision required by paragraph (h) of AD 2017-17-09, Amendment 39-18999 (82 FR 40477, August 25, 2017).

Related Service Information Under 1 CFR part 51

We reviewed Boeing 737-100/200/200C/300/400/500 Airworthiness Limitations (AWLs) and Certification Maintenance Requirements (CMRs), D6-38278-CMR, dated March 2019. This service information describes airworthiness limitations that include Airworthiness Limitation Instructions (ALI) and Critical Design Configuration Control Limitations (CDCCL) tasks related to fuel tank ignition prevention and the nitrogen generation system. This service information is reasonably available because the interested parties have access to it through their normal course of business or by the means identified in the ADDRESSES section.

FAA's Determination

We are proposing this AD because we evaluated all the relevant information and determined the unsafe condition described previously is likely to exist or develop in other products of the same type design.

Proposed AD Requirements

This proposed AD would require revising the existing maintenance or inspection program, as applicable, to incorporate new or revised AWLs.

This proposed AD would require revisions to certain operator maintenance documents to include new actions (e.g., inspections) and CDCCLs. Compliance with these actions and CDCCLs is required by 14 CFR 91.403(c). For airplanes that have been previously modified, altered, or repaired in the areas addressed by this proposed AD, the operator may not be able to accomplish the actions described in the revisions. In this situation, to comply with 14 CFR 91.403(c), the operator must request approval for an alternative method of compliance according to paragraph (k) of this proposed AD.

Differences Between this Proposed AD and the Service Information

Paragraph (g) of this proposed AD would require operators to revise their maintenance or inspection program by incorporating, amongst other tasks, AWL No. 28-AWL-05, “Wire Separation Requirements for New Wiring Installed in Proximity to Wiring that Goes Into the Fuel Tanks,” in Boeing 737-100/200/200C/300/400/500 Airworthiness Limitations (AWLs) and Certification Maintenance Requirements (CMRs), D6-38278-CMR, dated March 2019. Paragraph (h) of this proposed AD would allow certain changes to be made to the wire type and sleeving requirements specified in AWL No. 28-AWL-05 as an option.

Costs of Compliance

We estimate that this proposed AD affects 381 airplanes of U.S. registry. We estimate the following costs to comply with this proposed AD:

We have determined that revising the existing maintenance or inspection program takes an average of 90 work-hours per operator, although we recognize that this number may vary from operator to operator. In the past, we have estimated that this action takes 1 work-hour per airplane. Since operators incorporate maintenance or inspection program changes for their affected fleet(s), we have determined that a per-operator estimate is more accurate than a per-airplane estimate. Therefore, we estimate the total cost per operator to be \$7,650 (90 work-hours x \$85 per work-hour).

Authority for this Rulemaking

Title 49 of the United States Code specifies the FAA’s authority to issue rules on aviation safety. Subtitle I, section 106, describes the authority of the FAA Administrator. Subtitle VII: Aviation Programs, describes in more detail the scope of the Agency’s authority.

We are issuing this rulemaking under the authority described in Subtitle VII, Part A, Subpart III, Section 44701: “General requirements.” Under that section, Congress

charges the FAA with promoting safe flight of civil aircraft in air commerce by prescribing regulations for practices, methods, and procedures the Administrator finds necessary for safety in air commerce. This regulation is within the scope of that authority because it addresses an unsafe condition that is likely to exist or develop on products identified in this rulemaking action.

This proposed AD is issued in accordance with authority delegated by the Executive Director, Aircraft Certification Service, as authorized by FAA Order 8000.51C. In accordance with that order, issuance of ADs is normally a function of the Compliance and Airworthiness Division, but during this transition period, the Executive Director has delegated the authority to issue ADs applicable to transport category airplanes and associated appliances to the Director of the System Oversight Division.

Regulatory Findings

We determined that this proposed AD would not have federalism implications under Executive Order 13132. This proposed AD would not have a substantial direct effect on the States, on the relationship between the national Government and the States, or on the distribution of power and responsibilities among the various levels of government.

For the reasons discussed above, I certify this proposed regulation:

- (1) Is not a “significant regulatory action” under Executive Order 12866,
- (2) Is not a “significant rule” under the DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979),
- (3) Will not affect intrastate aviation in Alaska, and
- (4) Will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

List of Subjects in 14 CFR Part 39

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

The Proposed Amendment

Accordingly, under the authority delegated to me by the Administrator, the FAA proposes to amend 14 CFR part 39 as follows:

PART 39 - AIRWORTHINESS DIRECTIVES

1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

§ 39.13 [Amended]

2. The FAA amends § 39.13 by adding the following new airworthiness directive (AD):

The Boeing Company: Docket No. FAA-2019-0326; Product Identifier 2018-NM-166-AD.

(a) Comments Due Date

We must receive comments by [INSERT DATE 45 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

(b) Affected ADs

This AD affects the ADs specified in paragraphs (b)(1) through (b)(6) of this AD.

(1) AD 2008-10-09 R1, Amendment 39-16148 (74 FR 69264, December 31, 2009) (“AD 2008-10-09 R1”).

(2) AD 2011-12-09, Amendment 39-16716 (76 FR 33988, June 10, 2011) (“AD 2011-12-09”).

(3) AD 2013-13-15, Amendment 39-17503 (78 FR 42415, July 16, 2013) (“AD 2013-13-15”).

(4) AD 2013-25-05, Amendment 39-17701 (78 FR 78701, December 27, 2013) (“AD 2013-25-05”).

(5) AD 2016-18-16, Amendment 39-18647 (81 FR 65864, September 26, 2016) (“AD 2016-18-16”).

(6) AD 2017-17-09, Amendment 39-18999 (82 FR 40477, August 25, 2017)
("AD 2017-17-09").

(c) Applicability

This AD applies to all The Boeing Company Model 737-100, -200, -200C, -300, -400, and -500 series airplanes, certificated in any category.

(d) Subject

Air Transport Association (ATA) of America Code 28, Fuel; 47, Nitrogen Generation System.

(e) Unsafe Condition

This AD was prompted by a determination that new or revised airworthiness limitations (AWLs) are necessary. We are issuing this AD to address the potential of ignition sources inside fuel tanks, which, in combination with flammable fuel vapors, could result in fuel tank explosions and consequent loss of the airplane.

(f) Compliance

Comply with this AD within the compliance times specified, unless already done.

(g) Maintenance or Inspection Program Revision

(1) For The Boeing Company Model 737-100, -200, and -200C series airplanes: Within 60 days after the effective date of this AD, revise the existing maintenance or inspection program, as applicable, to incorporate the information specified in Section C, including Subsections C.1, C.2, and C.3 of Boeing 737-100/200/200C/300/400/500 Airworthiness Limitations (AWLs) and Certification Maintenance Requirements (CMRs), D6-38278-CMR, dated March 2019, except as provided in paragraph (h) of this AD. The initial compliance time for the airworthiness limitation instructions (ALI) tasks are within the applicable compliance times specified in paragraphs (g)(1)(i) through (g)(1)(x) of this AD.

(i) For AWL No. 28-AWL-01, “External Wires Over Center Fuel Tank”: Within 120 months after the most recent inspection was performed as specified in AWL No. 28-AWL-01, or within 12 months after the effective date of this AD if no initial inspection has been performed.

(ii) For AWL No. 28-AWL-03, “Fuel Quantity Indicating System (FQIS) – Out Tank Wiring Lightning Shield to Ground Termination”: Within 120 months after accomplishment of the actions specified in Boeing Service Bulletin 737-28A1178, or within 120 months after the most recent inspection was performed as specified in AWL No. 28-AWL-03, whichever is later.

(iii) For AWL No. 28-AWL-21, “Center Tank Fuel Boost Pump Automatic Shutoff System”: Within 12 months after accomplishment of the actions specified in Boeing Service Bulletin 737-28A1228, or within 12 months after the most recent inspection was performed as specified in AWL No. 28-AWL-21, whichever is later.

(iv) For AWL No. 28-AWL-22, “Auxiliary Tank Fuel Boost Pump Automatic Shutoff System”: Within 12 months after accomplishment of the actions specified in Boeing Service Bulletin 737-28A1228, or within 12 months after the most recent inspection was performed as specified in AWL No. 28-AWL-22, whichever is later.

(v) For AWL No. 28-AWL-23, “Over-Current and Arcing Protection Electrical Design Features Operation – Boost Pump Ground Fault Interrupter (GFI)”: Within 12 months after accomplishment of the actions specified in Boeing Service Bulletin 737-28A1212, or within 12 months after the most recent inspection was performed as specified in AWL No. 28-AWL-23, whichever is later.

(vi) For AWL No. 28-AWL-24, “Center Tank Fuel Boost Pump Power Failed On Protection System”: Within 12 months after accomplishment of the actions specified in Boeing Service Bulletin 737-28A1227, or within 12 months after the most recent inspection was performed as specified in AWL No. 28-AWL-24, whichever is later.

(vii) For AWL No. 28-AWL-25, “Auxiliary Fuel Tank Boost Pump Power Failed On Protection System”: Within 12 months after accomplishment of the actions specified in Boeing Service Bulletin 737-28A1227, or within 12 months after the most recent inspection was performed as specified in AWL No. 28-AWL-25, whichever is later.

(viii) For AWL No. 28-AWL-29, “AC Fuel Boost Pump Installation”: Within 72 months after the most recent inspection was performed as specified in AWL No. 28-AWL-29, or within 12 months after the effective date of this AD if no inspection has been performed in the last 72 months.

(ix) For AWL No. 47-AWL-04, “Nitrogen Generation System (NGS) – Thermal Switch”: Within 22,500 flight hours after accomplishment of the actions specified in Boeing Service Bulletin 737-47-1005; within 22,500 flight hours after accomplishment of the actions specified in Boeing Service Bulletin 737-47-1008; or within 22,500 flight hours after the most recent inspection was performed as specified in AWL No. 47-AWL-04; whichever is latest.

(x) For AWL No. 47-AWL-05, “Nitrogen Generation System (NGS) – Nitrogen Enriched Air (NEA) Distribution Ducting Integrity”: Within 14,500 flight hours after accomplishment of the actions specified in Boeing Service Bulletin 737-47-1005; within 14,500 flight hours after accomplishment of the actions specified in Boeing Service Bulletin 737-47-1008; or within 14,500 flight hours after the most recent inspection was performed as specified in AWL No. 47-AWL-05; whichever is latest.

(2) For The Boeing Company Model 737-300, -400, and -500 series airplanes: Within 60 days after the effective date of this AD, revise the existing maintenance or inspection program, as applicable, to incorporate the information specified in Section C, including Subsections C.1, C.2, and C.3 of Boeing 737-100/200/200C/300/400/500 Airworthiness Limitations (AWLs) and Certification Maintenance Requirements (CMRs), D6-38278-CMR, dated March 2019; except as provided in paragraph (h) of this

AD. The initial compliance time for the ALI tasks are within the applicable compliance times specified in paragraphs (g)(2)(i) through (g)(2)(xi) of this AD.

(i) For AWL No. 28-AWL-01, “External Wires Over Center Fuel Tank”: Within 120 months after the most recent inspection was performed as specified in AWL No. 28-AWL-01, or within 12 months after the effective date of this AD if no initial inspection has been performed.

(ii) For AWL No. 28-AWL-03, “Fuel Quantity Indicating System (FQIS) – Out Tank Wiring Lightning Shield to Ground Termination”: Within 120 months after accomplishment of the actions specified in Boeing Service Bulletin 737-28A1175; within 120 months after accomplishment of the actions specified in Boeing Service Bulletin 737-28A1183; within 120 months after accomplishment of the actions specified in Boeing Service Bulletin 737-28A1186; or within 120 months after the most recent inspection was performed as specified in AWL No. 28-AWL-03; whichever is latest.

(iii) For AWL No. 28-AWL-20, “Center Tank Fuel Boost Pump Automatic Shutoff System”: Within 12 months after accomplishment of the actions specified in Boeing Service Bulletin 737-28A1216, or within 12 months after the most recent inspection was performed as specified in AWL No. 28-AWL-20, whichever is later.

(iv) For AWL No. 28-AWL-21, “Auxiliary Tank Fuel Boost Pump Automatic Shutoff System”: Within 12 months after accomplishment of the actions specified in Boeing Service Bulletin 737-28A1216, or within 12 months after the most recent inspection was performed as specified in AWL No. 28-AWL-21, whichever is later.

(v) For AWL No. 28-AWL-22, “Over-Current and Arcing Protection Electrical Design Features Operation – Boost Pump Ground Fault Interrupter (GFI)”: Within 12 months after accomplishment of the actions specified in Boeing Service Bulletin 737-28A1212, or within 12 months after the most recent inspection was performed as specified in AWL No. 28-AWL-22, whichever is later.

(vi) For AWL No. 28-AWL-23, “Center Tank Fuel Boost Pump Power Failed On Protection System”: Within 12 months after accomplishment of the actions specified in Boeing Service Bulletin 737-28A1227, or within 12 months after the most recent inspection was performed as specified in AWL No. 28-AWL-23, whichever is later.

(vii) For AWL No. 28-AWL-24, “Auxiliary Fuel Tank Boost Pump Power Failed On Protection System”: Within 12 months after accomplishment of the actions specified in Boeing Service Bulletin 737-28A1227, or within 12 months after the most recent inspection was performed as specified in AWL No. 28-AWL-24, whichever is later.

(viii) For AWL No. 28-AWL-27, “AC Fuel Boost Pump Installation”: Within 72 months after the most recent inspection was performed as specified in AWL No. 28-AWL-27, or within 12 months after the effective date of this AD if no inspection has been performed in the last 72 months.

(ix) For AWL No. 28-AWL-31, “Cushion Clamps and Teflon Sleeving Installed on Out-of-Tank Wire Bundles Installed on Brackets that are Mounted Directly on the Fuel Tanks”: Within 144 months after accomplishment of the actions specified in Boeing Service Bulletin 737-28A1228.

(x) For AWL No. 47-AWL-04, “Nitrogen Generation System (NGS) – Thermal Switch”: Within 22,500 flight hours after accomplishment of the actions specified in Boeing Service Bulletin 737-47-1005; within 22,500 flight hours after accomplishment of the actions specified in Boeing Service Bulletin 737-47-1008; or within 22,500 flight hours after the most recent inspection was performed as specified in AWL No. 47-AWL-04; whichever is latest.

(xi) For AWL No. 47-AWL-05, “Nitrogen Generation System (NGS) – Nitrogen Enriched Air (NEA) Distribution Ducting Integrity”: Within 14,500 flight hours after accomplishment of the actions specified in Boeing Service Bulletin 737-47-1005; within 14,500 flight hours after accomplishment of the actions specified in Boeing Service

Bulletin 737-47-1008; or within 14,500 flight hours after the most recent inspection was performed as specified in AWL No. 47-AWL-05; whichever is latest.

(h) Additional Acceptable Wire Types and Sleeving

As an option, when accomplishing the actions required by paragraph (g) of this AD, the changes specified in paragraphs (h)(1) and (h)(2) of this AD are acceptable.

(1) Where AWL No. 28-AWL-05 identifies wire types BMS 13-48, BMS 13-58, and BMS 13-60, the following wire types are acceptable: MIL-W-22759/16, SAE AS22759/16 (M22759/16), MIL-W-22759/32, SAE AS22759/32 (M22759/32), MIL-W-22759/34, SAE AS22759/34 (M22759/34), MIL-W-22759/41, SAE AS22759/41 (M22759/41), MIL-W-22759/86, SAE AS22759/86 (M22759/86), MIL-W-22759/87, SAE AS22759/87 (M22759/87), MIL-W-22759/92, and SAE AS22759/92 (M22759/92); and MIL-C-27500 and NEMA WC 27500 cables constructed from these military or SAE specification wire types, as applicable.

(2) Where AWL No. 28-AWL-05 identifies TFE-2X Standard wall for wire sleeving, the following sleeving materials are acceptable: Roundit 2000NX and Varglas Type HO, HP, or HM.

(i) No Alternative Actions, Intervals, or Critical Design Configuration Control Limitations (CDCCLs)

After the existing maintenance or inspection program has been revised as required by paragraph (g) of this AD, no alternative actions (e.g., inspections), intervals, or CDCCLs may be used unless the actions, intervals, and CDCCLs are approved as an alternative method of compliance (AMOC) in accordance with the procedures specified in paragraph (k) of this AD.

(j) Terminating Actions for Certain AD Requirements

Accomplishment of the revision required by paragraph (g) of this AD terminates the requirements specified in paragraphs (j)(1) through (j)(6) of this AD for that airplane:

- (1) All requirements of AD 2008-10-09 R1.
- (2) The revision required by paragraph (l) of AD 2011-12-09.
- (3) The revision required by paragraph (h) of AD 2013-13-15.
- (4) The revision required by paragraph (j) of AD 2013-25-05.
- (5) The revisions required by paragraphs (l) and (n) of AD 2016-18-16.
- (6) The revision required by paragraph (h) of AD 2017-17-09.

(k) Alternative Methods of Compliance (AMOCs)

(1) The Manager, Los Angeles ACO Branch, FAA, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19. In accordance with 14 CFR 39.19, send your request to your principal inspector or local Flight Standards District Office, as appropriate. If sending information directly to the manager of the certification office, send it to the attention of the person identified in paragraph (l)(2) of this AD. Information may be emailed to: 9-ANM-LAACO-AMOC-Requests@faa.gov.

(2) Before using any approved AMOC, notify your appropriate principal inspector, or lacking a principal inspector, the manager of the local flight standards district office/certificate holding district office.

(3) An AMOC that provides an acceptable level of safety may be used for any repair, modification, or alteration required by this AD if it is approved by the Boeing Commercial Airplanes Organization Designation Authorization (ODA) that has been authorized by the Manager, Los Angeles ACO Branch, FAA, to make those findings. To be approved, the repair method, modification deviation, or alteration deviation must meet the certification basis of the airplane, and the approval must specifically refer to this AD.

(I) Related Information

(1) For more information about this AD, contact Jeffrey Rothman, Aerospace Engineer, Propulsion Section, FAA, Seattle ACO Branch, 2200 South 216th St., Des Moines, WA 98198; phone and fax: 206-231-3558; email: jeffrey.rothman@faa.gov.

(2) For information about AMOCs, contact Serj Harutunian, Aerospace Engineer, Propulsion Section, FAA, Los Angeles ACO Branch, 3960 Paramount Boulevard, Lakewood, CA 90712-4137; phone: 562-627-5254; fax: 562-627-5210; email: serj.harutunian@faa.gov.

(3) For service information identified in this AD, contact Boeing Commercial Airplanes, Attention: Contractual & Data Services (C&DS), 2600 Westminister Blvd., MC 110-SK57, Seal Beach, CA 90740-5600; phone: 562-797-1717; Internet: <https://www.myboeingfleet.com>. You may view this service information at the FAA, Transport Standards Branch, 2200 South 216th St., Des Moines, WA. For information on the availability of this material at the FAA, call 206-231-3195.

Issued in Des Moines, Washington, on May 20, 2019.

Michael Kaszycki,
Acting Director,
System Oversight Division,
Aircraft Certification Service.
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